

# NOTES ON SOME NEW AND INTERESTING BUTTERFLIES FROM INDIA AND BURMA

BY

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## PART I

(*With one coloured and one black and white plate*)

### INTRODUCTION

The butterflies from the extreme North-West of India are but little known; Chitral has been worked by several collectors fairly thoroughly, and results have been published by Capt. (now Colonel) W. H. Evans, but the adjoining territories of Gilgit, Hunza-Nagar, Astor and Chilas, which are included in the Gilgit agency, and which are a mass of high and inaccessible mountains, have been practically untouched and very little is known of the butterflies that inhabit them.

In 1920 I proceeded on a shooting trip to Astor and availed myself of the opportunity to collect what butterflies I could in the short time at my disposal.

Through the kindness of Lieut.-Col. D. L. Lorimer, C.I.E., late Political Agent of Gilgit, I have received numerous specimens of butterflies collected by himself and by the local inhabitants in out of the way and inaccessible places of the Gilgit Agency, and but for his kindness and the trouble he has taken on my behalf, the material which has made it possible for me to write much of these notes would never have been obtained.

In 1924 I was transferred to Burma and did a certain amount of collecting at Maymyo and the Southern Shan States during the year I was there. Burma is most interesting entomologically and much work still remains to be done. Certain rich localities such as Thandaung are well known and have been worked thoroughly, but speaking generally most places have been but partially worked and some places on the Chinese and Siam borders are practically untouched, and other places, such as Putao on the extreme N.-E. of Burma, are quite unknown entomologically and a rich harvest awaits the first collector who is able to collect in Putao, the only part of Burma where snow-clad mountains occur to any extent.

At Maymyo I was fortunate to meet Mr. G. Cooper of the Survey of India who has done such good pioneer work in collecting in out of the way places and whose fine collection I was privileged to see. I am also indebted to him for the gift of many rare and interesting specimens.

In the spring of 1925 I proceeded to England on leave and was able to work out at the British Museum, South Kensington, the material I had accumulated and write my conclusions in these notes.

I take this opportunity to thank Capt. Riley of the British Museum for his invariable courtesy and ever ready help afforded me in working out my material but for which my task would have been rendered much more difficult.

#### 1. *Troides ferrari*, n. sp.

The female differs from all other females of the yellow forms of *Troides* in the British Museum in the *different shape of the yellow patch* in the cell of the hind wing which is *oval* and extends from the apex to about  $\frac{2}{3}$  the length of the cell but does not touch and is well clear of the upper-discocellular. The yellow spot in interspace 6 is very small and narrow and adjoins v. 6 but not v. 7; the yellow spot in interspace 1 is as long as spot in cell; the yellow spots in inter-

spaces 2, 3, 4 and 5 are less than half the distance from the discocellulars to the outer margin; these are followed by large black spots entirely filling the interspaces and by small streaks on either side of the veins. Forewing black with veins very distinctly edged with grey.

Expanse: ♀ 174 mm.

Three females were caught by Lieut.-Col. Ferrar, C.I.E., Chief Commissioner of the Andamans, in the Great Nicobar Islands. It appears to be very close to *T. darsius*, ♀, from Ceylon but until the male is discovered its affinities cannot be determined.

The type is in my collection.

## 2. *Papilio noblei haynei*, sub-sp. n.

Bingham in his description of *P. noblei* says, 'Forewing with or without a quadrate white spot in the middle of interspaces 1 (a) and 1'', and Frukstorfer in Seitz's work only mentions a form of *noblei* which has a white patch on the hind margin of the forewing and gives the distribution of *noblei* from Upper Burma to Tonkin. I do not know whether de Nicéville's type has a white spot on the forewing as I have not seen his original description and figure but had his type not had a white spot on the forewing I think Frukstorfer would have noticed it and given another name for the form with a white spot. I am unaware whether specimens with or without the white spot on the forewing occur together or not but a solitary specimen in the British Museum taken by Colonel Broughton at Ye' pank-kan, Southern Shan States, West of Pyinmana and a series from Tonkin in the Adam's collection all have the white spot on the forewing upper and underside; one specimen from Central Tonkin in my own collection in addition to the white spot on the forewing also has three yellow lunules on the hind wing. A series of *P. noblei* taken by Dr. Hayne near Myitkyina, North Burma, does not possess the white spot on the forewing either above or below and it would appear that in North Burma a race has developed without a white spot on forewing whilst further south a form with the white spot occurs. I propose calling the form from Myitkyina as above after Dr. Hayne who very kindly gave me two males from his series.

Expanse.—♂ 102 mm.

The type is in my collection.

## 3. *Paranticopsis xenocles phrontis*, de N.

A very curious melanitic ♂ of this species was taken by Mr. E. Ollenbach's collector in Sikkim. It is much darker than any ♀ I have ever seen.

The specimen is in my collection.

## 4. *Parnassius dongalaica*, sp. n. Pl. IV, Fig. 5, ♀

A single ♀ which may be a race of *P. mercurius*, Gr-Gr. from Amdo, N.E. Tibet was taken on the Donga-La, on the road to Mount Everest at 16,000'.

It differs from typical ♀ of *P. mercurius* in the British Museum collection in being much smaller and paler, and in having a well-marked series of white marginal and sub-marginal spots on both wings; at the base of the hindwing there is a large crimson spot which is wanting in all the ♂ and ♀ specimens in the British Museum.

In appearance it is somewhat like *P. epaphus everesti* Riley, but the keeled pouch at once separates it from that form and places it in the *Discobulus*—*Jacquemontii* *Mercurius* group.

The type is in my collection.

## 5. *Parnassius discobulus*, Alph :

The *discobulus*—*jacquemontii* forms occurring in Chitral and Gilgit are somewhat confusing and I find it difficult to place some of the forms under their correct names.

In Chitral and Gilgit there are five forms in which the females have keeled pouches; two of these fly together on the Shandur Pass; one of these is a large insect, 78 mm. in expanse with large red discal spots but no red spot at tornus, which I take to be *P. discobulus* Alph: or a race of it; and the other a much smaller and whiter insect, 60-64 mm. in expanse, in which the females have

red ternal spots; I take this to be a race of *P. jacquemontii*. It is not *P. jacquemontii chitralensis* which is a different looking insect and flies much further south—in Shiski Kuh and Jhela Drosh—and has all the red spots very bright. I propose naming the Shandun-form of *P. jacquemontii*, *P. j. shandura* sub-sp. n.

Further North and in the extreme N. E. corner of Chitral on the Baroghil Pass leading into Wakhan, Afghanistan, another form of *P. discobulus* occurs which I propose calling *P. d. baroghila* sub-sp. n.

In Hunza the most easterly province of the Gilgit agency yet another *discobulus* form occurs which I propose calling *P. j. hunzaica*, sub-sp. n.

6. *P. jacquemontii shandura*, sub-sp. nov. Pl. IV, Fig. 3 ♂, 4 ♀:

This is the smallest and palest form of *P. jacquemontii* in the North-West of India; the males are very white looking and both sexes either entirely lack or have very little dusky powdering on the wings. The females have red ternal spots on both sides of the hind wing.

Expanse: ♂, ♀, 60-64 mm.

Described from three males in the British Museum and two males and three females in my collection all from the Shandur Pass, Chitral.

The types are in my collection and para types are in the British Museum.

7. *P. discobulus baroghila*, sub-sp. nov. Pl. IV, Fig. 1 ♀

This form is smaller than *P. discobulus* from the Shandun Pass and not so dark. The females have no red ternal spots on the hind wing and agree with *P. discobulus* from the Shandun Pass in this respect.

Expanse: ♂ 66-70; ♀ 64-70 mm.

A very fine series of this insect was obtained by Lieut.-Col. D. L. Lorimer, late Political Agent, Gilgit, on the Baroghila Pass at the extreme north-east corner of Chitral.

The types are in my collection and para types are in the British Museum.

8. *Parnassius discobulus hunzaica*, sub-sp. nov. Pl. IV, Fig. 2, ♀

This form is very like *P. d. baroghila* but averages smaller and is much darker especially in the females which are as dark as the females of *P. discobulus* from the Shandun Pass. It is very near if not identical to an unnamed form in the British Museum from the Hindu Kush and which is the *rhodius* of other authors, not *rhodius* of Honrath. The type of *P. rhodius* Honr., a male is in the Adam's collection in the British Museum and is according to Mr. Riley an *epaphus* form and therefore the *jacquemontii* forms which have been known by the name of *rhodius* require a new name and I propose the above for this form.

Expanse: ♂ 64, ♀ 64-70.

Numerous specimens of both sexes were received from Misgar in Hunza, taken in August; it appears to be very common.

9. *Parnassius delphius stoliczkana*, Fd.

A female taken south of Leh in Ladak agrees well with the figure of the type specimen and the figure given by Moore.

There are no specimens of true *P. stoliczkana* in the British Museum but there were two specimens over the label of this name which have nothing to do with this form, one being a specimen of my *P. delphius rileyi* from the Rupal Valley in Astor and the other of doubtful locality.

10. *Parnassius delphius chitralica*, Verity

*P. delphius chitralica* from Chitral is very similar to *P. delphius hunza* Gr-Gr., the type of which is from the Hindu Kush probably north of Hunza in Eastern Gilgit but rather smaller and darker.

Two specimens were received from Yasin, Western Gilgit, on the borders of Chitral which are similar to typical *chitralica*. Three specimens from Misgar, Hunza are like *chitralica* but larger and are darker than *hunza* but approach the latter in size.

11. *Parnassius delphius rileyi*, sub-sp. nov. Pl. IV, Fig. 6 ♂, 7 ♀

Male and female very near to *P. nicevillei* from the Burzil Pass, Gurais, which again is very close to *P. atkinsoni* from the Pir Panjal and from Haramosh Mountain in Gilgit; it differs from the latter in the smaller marginal spots of the hind wing; these spots are about the same size in *rileyi* as in *nicevillei*, the former, i.e., *P. rileyi*, however differs from *P. atkinsoni* in not having the red spot in interspace 2 of the hind wing nearly so well developed; in both *P. nicevillei* and in *P. atkinsoni* this spot is large and bright; in some specimens of *P. rileyi* this spot is very small and inconspicuous and in one it is completely absent and is replaced by a very large black spot.

The types are in my collection and came from Rupal Valley, Astor and the Farsat Pass leading into Chilas. Para types are in the British Museum. The Farsat Pass is on a continuation of the Range of Mountains on the south side of the Rupal Valley.

The insect is not rare and a good series was taken in July and August. I did not meet with *P. nicevillei* when crossing the Burzil Pass in July.

12. *Parnassius delphius zogilaica*, sub-sp. nov. Pl. IV, Fig. 5 ♀

A single ♀ from near the Zogila Pass, N. Kashmir, differs from its allies *P. nicevillei* and *P. rileyi* in being much paler on both wings and the marginal spots are rather smaller and largely centred with blue; these spots do not touch one another and are placed on a white ground with no dusky scales between them; in *nicevillei*, *rileyi* and *atkinsoni* the ground colour between these spots is more or less covered with dusky scales.

The specimen obtained agrees well with the description by Avinoff, in the Transactions of the Entomological Society of London, 1915, p. 354, of a male sent to him from Zogila.

♀ Type is in my own collection.

13. *Parnassius delphius atkinsoni*, M.

Type from Pir Panjal, Kashmir.

*P. delphius nicevillei* Avinoff, the type of which is from the Burzil Pass between Gurais and Astor in Kashmir, only differs from *P. d. atkinsoni* in having the marginal spots on the hindwing rather smaller.

Major Stockley took four specimens of a form of *P. delphius* on the slopes of Haramosh Mountain in Eastern Gilgit which appear to be *P. d. atkinsoni* and are indistinguishable from specimens of that form from the Pir Panjal. This is curious as these localities are widely separated and two forms at least—e.g. *P. d. zogilaica* and *P. d. nicevillei* occur between them.

14. *Parnassius delphius florenciæ*, sub-sp. nov., Pl. IV, Fig. 9, ♂

Many years ago I sent a *delphius* form to the late Col. Bingham for identification and he informed me that it was new and named it *P. florenciæ* at my request. I have been unable to trace the publication of the description of this specimen and it is possible he never published it at all, so it may be advisable to describe it again.

Male: Upperside. Rather similar to *P. delphius stoliczкана* Felder but with the wings still whiter and with no dusky scaling in interspaces 1, 2 and 3 of the forewing except a very small and clear dark spot in interspace 1 and with no dusky scaling on the hind wing; marginal area of forewing very dark and broad bearing a row of small and clear white spots not so disjointed in interspace 4 as in *P. d. stoliczкана*. Hind wing marginal area completely dusky with three complete dark spots bearing bluish centres and two small dark spots without blue scales; spots in 2, 3 and 4 are in a line and not as in *P. d. stoliczкана* in which 3 is inwardly thrown out of line; a clear small red spot on the disc and a very small one at the tornal angle.

Underside: Similar to upperside.

A single male was taken in June 1906 near Phup, Hundes, North of Tehri Garhwal, at 15,000 feet.

15. *Parnassius simo lorimeri*, sub-sp. n., Pl. IV, Fig. 10, ♂

Male and female very like *P. boedromus*, *f. hohlbecki* Avinoff from the Alexandra Mts., Central Asia which may be a form or race of *P. simo* but which Avinoff has treated as a distinct species. The sexes are exactly alike and differ from the form of *P. boedromus* above mentioned in being somewhat paler, the dark spots in cell of forewing not so well developed and in the greater development of the black spot in interspace 5 of the hindwing which is as well developed as the spot in interspace 7.

I have much pleasure in naming this butterfly after Lt.-Col. Lorimer, C.I.E., late Political Agent, Gilgit, who captured a pair on the Kine-Chish Pass, south-west of the town of Gilgit, at about 14,000'. It appears to be very rare and the two specimens captured were the only ones seen; they were flying about at the extreme summit of the Pass which leads into Tribal territory.

16. *Aporia nabellica ferrari*, sub-sp. nov.

The male differs from typical *nabellica* from Kashmir in being much paler than even the females of that form.

The females are very white with black markings and grey powdering on the disc.

Expanse: ♂ 52—60 mm., ♀ 60—62 mm.

Habitat.—Dalhousie, Dugi Pass and Valossa. Several specimens were taken by Colonel Ferrar at Dalhousie in the Western Himalayas and there are four males and four females in the British Museum from the Dugi Pass and Valossa and one ♂ without locality which belong to this race.

17. *Gonepteryx rhamni gilgitica*, sub-sp. n.

Male: Similar to *G. rhamni nepalensis*.

Female. Differs from the ♀ of *nepalensis* in having the extreme base of the costa and the apex of the forewing distinctly tinged with ochreous yellow and the dorsal area and terminal margin of the hindwing as far as v. 4 also tinged with the same colour.

Habitat: Gilgit; Astor; Chilas. A large series of both sexes were received from the above mentioned places.

The types are in my collection and para types are in the British Museum.

18. *Gonepteryx rhamni burmensis*, sub-sp. n.

Male: *Upperside* very similar to *G. rhamni major*, Oberthur, from western China but smaller and orange spots much smaller. The yellow on the forewing is distinctly darker than the hindwing.

Female: *Upperside* both wings of the same colour as the hindwing of the male and similar to the ♀ of *major* named by Verity ♀ *ab. mascula*. In *major* the typical ♀ is cream colour, a yellow form *mascula* Verity occurring occasionally; in *burmensis* the typical ♀ form is yellow, I have not seen any cream coloured females.

Expanse: ♂ 62 mm., ♀ 66 mm.

Habitat: Southern Shan States.

The types are in my collection and para types are in the British Museum.

19. *Colias wiskotti chrysoptera*, Gr.-Gr.

A male and three females were obtained from the Baroghil Pass Chitral, Yarkhun, Ghizer and Gilgit. The females vary greatly *inter se* :—

One is orange-yellow.

One lemon-yellow.

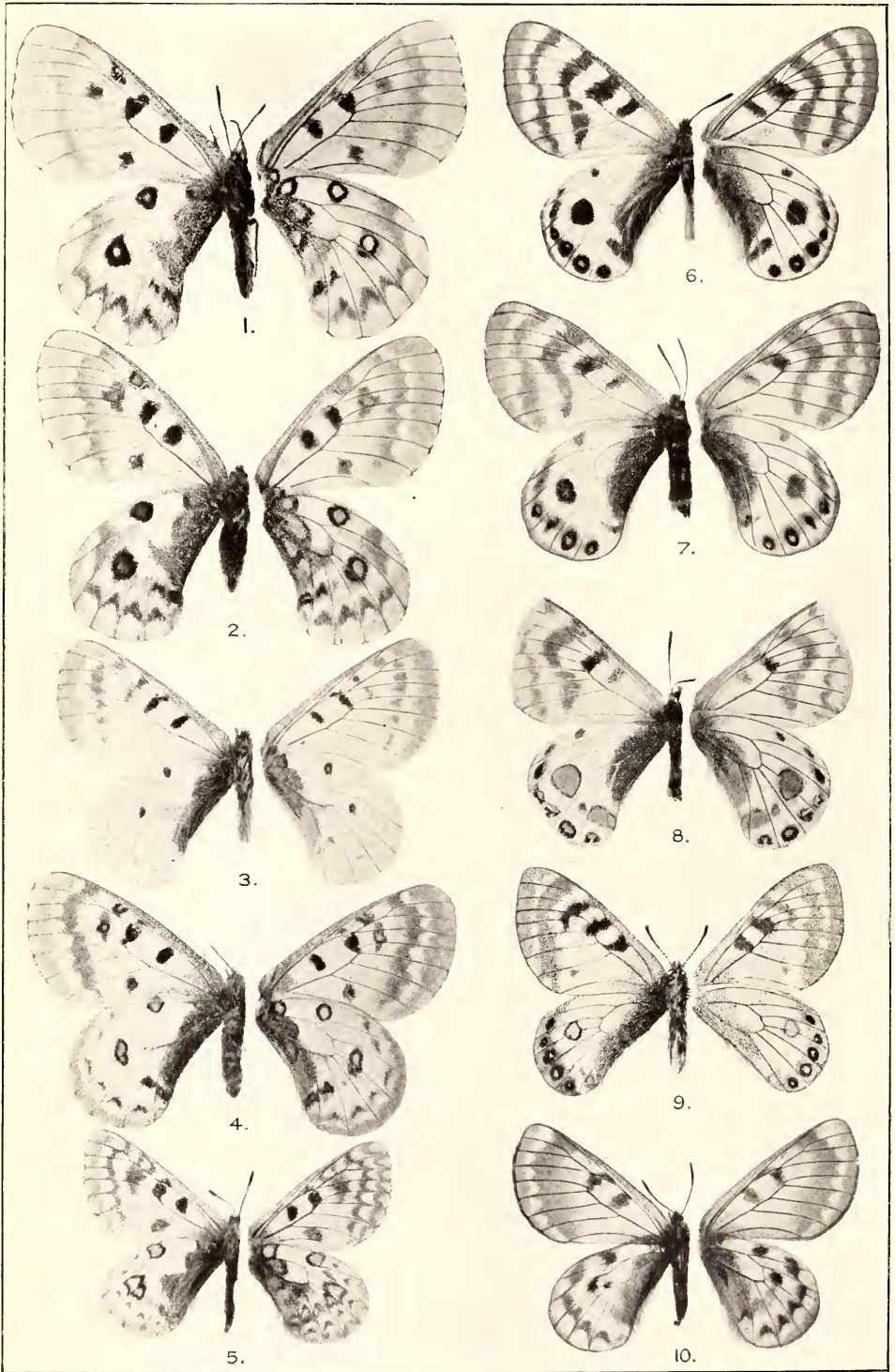
One white approaching ♀ *ab: leachi* Gr.-Gr., but with the dorsal margin upper hind wing distinctly tinged with yellow.

20. *Colias marcopolo*, Grm.-Grsh.

A male taken in the Thui Nala, Yasin Gilgit, in September agrees well with specimens in the British Museum from Turkestan and the Hindu Kush but the inner margin to the black border of the forewing is *conspicuously* indented and forms a continuous row of luneles.

This species has not previously been recorded from within Indian limits.





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EXPLANATION OF PLATE IV.

- Fig. 1. *Parnassius discobolus baroghila*, ssp. n., ♂  
" 2. " " *hunzaica*, ssp. n., ♀.  
" 3. " *jacquemontii shandura*, ssp. n., ♂.  
" 4. " " " " ♀.  
" 5. " *dongalaica*, ssp. n., ♀.  
" 6. " *delphius rileyi*, ssp. n., ♂.  
" 7. " " " " ♀.  
" 8. " " *zogilaica*, ssp. n., ♀.  
" 9. " " *florenciæ*, ssp. n., ♂.  
" 10. " *simo lorimeri*, ssp. n., ♀.



SOME NEW AND INTERESTING  
 SPECIES

Fig. No.	Species Name	Locality
1	<i>...</i>	...
2	<i>...</i>	...
3	<i>...</i>	...
4	<i>...</i>	...
5	<i>...</i>	...
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7	<i>...</i>	...
8	<i>...</i>	...
9	<i>...</i>	...
10	<i>...</i>	...

21. *Colias cocandica hindnencica*, Verity

Four males and three females of a form hardly distinguishable from specimens of *C. hinducucica*. Verity from the Hindu Kush Mountains in the British Museum were received from Misgar, Hunza Gilgit.

This species has not previously been recorded from within Indian limits.

22. *Oeneis garhwalica*, sp. nov. Pl. IV, Fig. 4, ♀

Male: *Upperside* pale yellowish brown, very much the same colour as *Paroeneis pumilus* Felder.

*Forewing*: basal area and cell brownish and a broad brown marginal area; a row of dark spots in interspaces 2, 3 and 5; *hindwing*: a broad brown marginal area as in the forewing; dark markings on underside showing through on both wings.

*Underside*: *Forewing* a brown streak across the upper portion of the cell, another closing it and an irregular brown line just beyond it from costa to the dorsum; a broad brown marginal band; *hindwing* pale lilac speckled with brown; a broad dark band starting at the costa bent at right angles at its middle and reaching the middle of the dorsum; a broad marginal band; veins pale lilac.

Female: as in male but paler.

Three males and a female were taken at Shiruans, Garhwal, at 13,500' in July.

The types are in my collection and a para type of the male is in the British Museum.

23. *Pararge menava moeroides*, Fd.

A male and two females from Ladak appear to belong to this form; the male has a distinct small yellow patch on the forewing as in *moerula* and *schakra* but much smaller and not so bright. The females have a large yellow patch as in *moerula* and *schakra* but brighter.

*Moeroides* is usually sunk as a synonym of *menava* but it is certainly a very different looking insect and appears to be a distinct race of that species.

24. *Aulocera swaha gilgitica*, sub-sp. nov.

Male and female differ from typical *swaha* on the upperside in having the bands pure white instead of cream colour on the forewing.

On the underside both wings are very pale grey with the markings on the termen of the hindwing very obscure; bands pure white.

Col. Evans described the form of *swaha* from the Safed Kot at the head of the Kurram Valley as *Kurrama*; this name should also apply to the form from Chitral from which it is indistinguishable.

*Kurrama* Ev. appears to be intermediate between typical *swaha* and *gilgitica* nihi.

The types are in my collection and para types in the British Museum.

The correct nomenclature and distribution of *Aulocera swaha* appears to be:—

*A. swaha swaha* Koll. Outer Himalayas. Murree to Darjeeling.

*A. swaha garuna*, Finst. Inner Himalayas, Gurais to hills north of Simla.

*A. swaha gilgitica*, Tyt. Astor, Chilas, Gilgit.

*A. swaha kurrama*, Ev. N. W. Frontier of India, Kurram Valley to Chitral.

25. *Aulocera padma grandis*, sub-sp. nov.

A pair taken in Yasin, Western Gilgit, differs from the typical form in having the white discal band on both wings under and the band on the hindwing curved and not straight.

*Underside*: the ground colour is lighter and more greyish and the white spots in interspaces 3 and 4 of the forewing coalesce and are not separate.

Expanse: ♂ 82 mm.; ♀ 90–98 mm.

Major Stockley obtained several specimens in Eastern Gilgit which agree with this form in all respects except that the white band on hindwing is straight and not curved.

The types are in my collection. The specimens obtained by Major Stockley are in the British Museum.

26. *Karanasa regeli chitralica*, sub-sp. nov.

There were several specimens of a form of *Karanasa* from Chitral above the type and label of *K. moorei* Evans in the British Museum which are not that species as they do not agree with the type but appears to be a race of the *regeli*; they are rather larger than *K. regeli boloricus* but are otherwise the same. I propose the above name for the Chitral form.

Expanse : ♂ 42 mm.; ♀ 49 mm.

The types are in the British Museum and a ♂ para type in my collection.

27. *Karanasa regeli boloricus* Gr-Gr.

A large number of both sexes were received from Misgar in Hunza, Gilgit, which agree with the male type and with a series of both sexes from the Hindu Kush in the British Museum.

28. *Karanasa moorei gilgitica*, sub-sp. nov.

Very similar to *K. moorei moorei* Ev., but on the *upper* and *undersides* of both sexes the yellow markings are rather washed out and have lighter coloured patches; on the underside of the hindwing the light markings are paler.

Expanse : ♂ 52 mm.; ♀ 56 mm.

Five males and six females were received from Yasin and Ghizer in Gilgit.

Colonel Evans places his *moorei* as a race of *regeli* but it is quite a different looking insect and it is better I consider to keep it separate.

29. *Karanasa pamirus safeda*, sub-sp. nov.

The form of *Karanasa* from the Safed Koh, Kurram Valley, sent me by Colonel Evans agrees closely with specimens of *K. pamirus josephi* Stdgr, from Bokhara. It is better placed for the present as a race of *pamirus* than as a race of *huebneri*.

I made no note as to how this form differs from *josephi* Stgr. as I was under the impression that Colonel Evans had described it; but on my return to India he informs me that he did not describe it and although he had appointed types he then thought it was not good enough and asked me to describe it myself. I am unable to do this as I have not the specimens with me. There is however a specimen in the British Museum presented by Colonel Evans labelled *Safeda* Evans and placed as a race of *huebneri* and I think it better to leave this form under the name given it by Colonel Evans than to change it.

The male type is in my collection and a male para type in the British Museum.

30. *Karanasa pamirus pupilata*, sub-sp. nov.

There was a series of a *Karanasa* form from Jhila Drosch, Chitral, in the British Museum and there are also a pair from Chitral in my collection which are different to other geographical forms of *Karanasa huebneri* and its allies and appears to be for the present best placed as a race of *K. pamirus*. In appearance the butterfly is somewhat like *K. pamirus safeda* mihi, but the white patch on the inner edge of the upper ocellus on the forewing is not so well developed and there are no white patches on the inner edge of the ochreous band on the upperside of the hindwing as in that form; on the underside the cell in the male is not marked with white as in *safeda*.

Expanse : ♂ 45 mm.; ♀ 48 mm.

The types are in my collection and para types are in the British Museum.

31. *Karanasa huebneri astorica*, sub-sp. nov.

The form of *huebneri* occurring in Astoris very close to *K. h. modesta* M., which occurs further east in the Deosai Plateau, but in the *males* the orange of both wings extends more into the brown basal area and in the *females* the orange colour replaces the brown basal area of the forewing as in the form *caedestis* M., which however is not a racial form but a casual variety and which

occurs in both the races of *modesta* M. and *astorica* mihi. The female of *modesta* M. has not the orange of the forewing so extended as in the female of *astorica* mihi.

Expanse: ♂ 46 mm.; ♀ 48 mm.

The types are in my collection and ♂ and ♀ para types are in the British Museum.

32. *Karanasa huebneri balti*, sub-sp. n. = *K. leechii* M. n. Gr-Gr.

Males darker and rather larger than *K. h. pallida* mihi; some males are very close to *K. h. astorica* mihi but the females are very different and are much paler.

Expanse: ♂ 48 mm.; ♀ 50 mm.

There is a good series of this form from Skoro La, Baltistan and from Kardhong in the British Museum.

This insect was given the name of *leechii* by Moore but this name must fall as *Karanasa leechii* Gr-Gr. has priority and was given to a very different form of *Karanasa* from the Hindu Kush Mountains.

33. *Karanasa huebneri pallida*, sub-sp. n.

The race of *K. huebneri* from the Chongking Valley can readily be distinguished from its allies by the extremely pale colouring of both wings in both sexes.

It is very close to the typical form from Lahoul but the yellow colour on both wings enters the brown basal area which it does not do in Felder's form.

There is a good series of this form from the Chongking Valley in the British Museum.

Expanse:—♂ 42 mm.; ♀ 41 mm.

The types are in the British Museum and para types are in my collection.

34. *Karanasa huebneri huebneri*, Felder

The types of Felder's *K. huebneri* came from Lahoul and the female only was figured. There are specimens of *K. huebneri* from Lahoul in the British Museum and these may be considered typical in the absence of the type.

There has been a good deal of confusion and doubt regarding the various forms of *Karanasa huebneri* and allied species inhabiting the Indian Region. Seitz in his *Macrolepidoptera of the World*, vol. i, p. 127, in treating *K. huebneri* Fd. states:—Now follow a whole series of forms of which some intergrade completely, and then includes the following forms under this species—*cadesia* M (= *Wilkinsi* Ersch., *josephi* Stdgr.), *leechi* Moore, *modesta* Moore, *dissoluta* Stgr., *intermedia* Gr-Grsh., *pamira* Stdgr., and again states 'all these forms often completely intergrade'.

Colonel Evans in his List of Butterflies from the Indian Region lumps all the Indian forms except one—e.g. *moorei* Evans, which he places as a race of *K. regeli* Alph—under the name of *K. huebneri* Fd. and gives no geographical races.

Without sufficient material it is very difficult to appreciate the differences amongst the various closely allied forms; but with the large series I was fortunate in obtaining from Astor and Gilgit together with other forms in my collection and with the fine series in the British Museum it was found possible to appreciate the collective differences of the various species or races when the individuals were placed in their geographical groups. The forms of *huebneri* and allied species appear to be very susceptible to environment and each distinct locality appears to develop a slightly different race.

The following appears to be a fairly satisfactory nomenclature and distribution of the various forms:—

	Type	Other localities
<i>K. regeli chitralica</i> , Tyt.	... Chitral	
<i>K. regeli boloricus</i> , Gr-Gr.	... Hindu Kush.	Hunza Gilgit
<i>K. moorei moorei</i> Ev.	... Shandur Pass, Chitral.	
<i>K. moorei gilgitica</i> , Tyt.	... Yasin, Gilgit	
<i>K. pamirus safeda</i> Ev.	... Safed Koh, Kurram Valley.	

	Type	Other localities
<i>K. pamiurus pupilata</i> , Tyt.	... Jhila Drosh, Chitral.	
<i>K. huebneri modesta</i> M.	... Deosai Plateau.	
<i>ab: cadesia</i> M.	... Deosai Plateau.	
<i>K. huebneri astorica</i> , Tyt	... Rupal Valley, Astor.	
<i>K. huebneri balti</i> , Tyt.	... Skro La Pass, Bal-	
	tistan.	
= <i>leechii</i> M. nee Gr-Gr.		
<i>K. huebneri pallida</i> , Tyt.	... Chongking Valley.	
<i>K. huebneri huebneri</i> Fd.	... Lahoul.	

35. *Eumenis mniszeckii baldira* M.

The forms of *E. mniszeckii* can at once be separated from those of *E. lehana* occurring within Indian limits by the presence of two small white centred dark spots or dark spots without the white centres placed between the two large black ocelli on the forewing.

Numerous females were received from Yasin, Gilgit, and a male undoubtedly of this form from Baluchistan was sent to me by Mr. E. Ollenbach. There are numerous specimens of both sexes in the British Museum and all have the dark spots with or without a white centre on the forewing as in typical *E. mniszeckii* but which are absent in *E. lehana*.

36. *Eumenis lehana droshica*, sub-sp. n.

A form of *Eumenis* occurring in Drosh, South Chitral and in the Shandur Pass, North-East Chitral appears to be a race of *E. lehana* but differs from typical *lehana* from Kardong, Ladak in the yellow bands and the basal brown areas of both wings being darker and in the yellow band of the hind wing in both sexes being broader and extending to the tornal angle.

The types are in my collection and para types are in the British Museum

37. *Eumenis lehana gilgitica*, sub-sp. n.

The form of *lehana* occurring in Ghizer, Gilgit, differs from the typical form from Ladak in having the yellow bands on the forewing narrower and darker as in *E. legana droshica*, and the yellow on the hindwing is also darker as in *droshica*, but the extent of the yellow is as in typical form and does not reach the tornal angle as in *droshica*. A good series of both sexes were taken by Lieut.-Col. Lorimer, Political Agent, Gilgit at Ghizer, Gilgit, and I possess specimens from the Shandur Pass where this race apparently meets with *droshica* mihi.

38. *Eumenis lehana clarissima* Seitz.

There were specimens in the British Museum of a form of *E. lehana* from Skardo Dras, the Chongking Valley and Hunza over the label *Eumenis lehana clarissima* Seitz and I have received specimens from Misgar Hunza and from Upshi which agree with these specimens but I am not at all sure that the name *clarissima* should apply to them as the type of *clarissima* is said to come from West China but this may possibly be a mistake. Those specimens agree with Seitz's figures of *clarissima* and the yellow bands anteriorly are paler.

The form from Skardo and Misgar are very close to typical *E. lehana* and are hardly worth separating.

39. *Erebia mani kamriana*, sub-sp. nov. Pl. I, Fig. 12, ♂

Male and Female: Forewing, apex more pointed than in the typical form and similar to *E. mani chitralica* Ev. but not so pointed as in *E. yasina* mihi and *E. lorimeri*, mihi. *Upperside*, a large patch on the forewing as in typical *E. mani* de N., but of a deep ferruginous colour somewhat as in *E. kalinda chitralica* Ev. but brighter; basal half of forewing brown; yellow rings to ocellus small. *Underside*: Forewing the red ferruginous patch large reaching base of v. 1; yellow ring to ocellus as on upperside.

Expanse; ♂ 50 mm.; ♀ 52 mm.

Several males and females were taken on the Kamri Pass, Gurais and a male on the Babusar Pass, Chilas, in August.

The types are in my collection and a male para type is in the British Museum collection.